React-Native Tutorial

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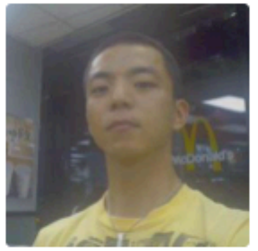

Jeff Gu Kang

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Seoul, South Korea Personal site Twitter JeffGuKang

Last seen: today

648

People and food lover.

I have been interested in front-end, backend, UI/UX and making services for people. If you have any interest about me for business or not, don't be shy. Just say hello.

Favorite editor: atom, xcode • First computer: Macbook 2005

I want to work with

it health location indoor game reactjs swift ios android mobile tizen web

TOP 20% swift

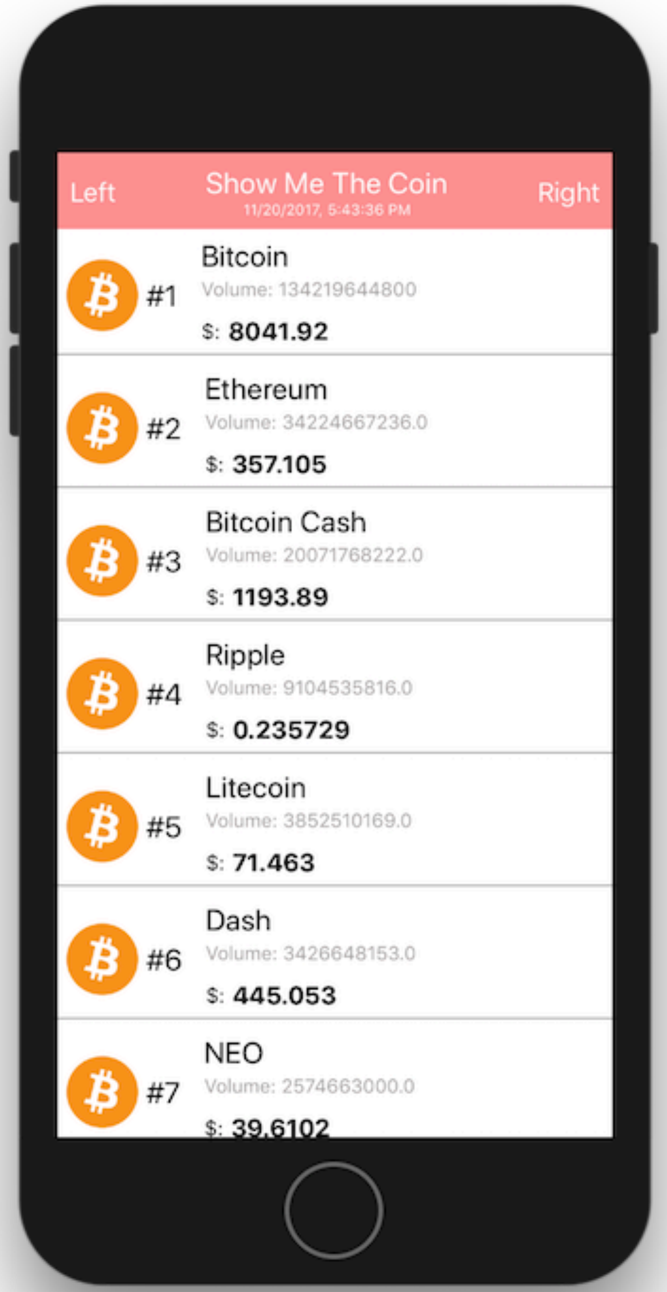
TOP 30% ios

I prefer not to work with

nothing

Hello! React Native


Zoom
1d
7d
1m
3m
1y
YTD
ALL
From
Mar 9, 2017
To
Mar 9, 2018
$320B
$240B
$160B
$80B
$0
Market Cap
$20,000.00
$15,000.00
$10,000.00
$5,000.00
$0
Price (USD)
24h Vol
12B
0
3. Apr
15. May
26. Jun
7. Aug
18. Sep
30. Oct
11. Dec
22. Jan
5. Mar



iPhone 8 - iOS 11.1

Contents

EXPO

React Native Helper

https://expo.io/

EXPO

React Native Helper

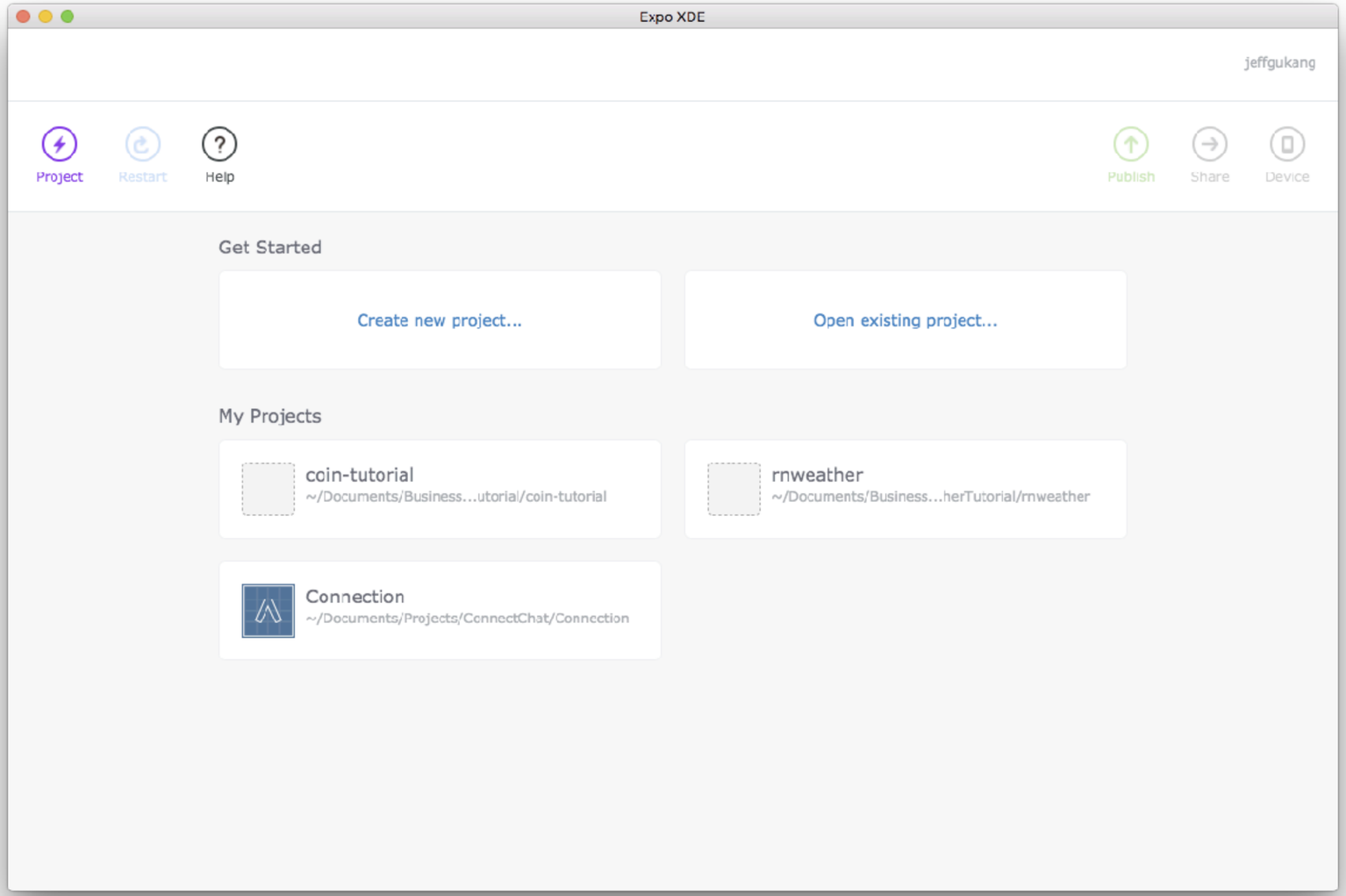
Expo XDE

Expo SDK

Native & JS Library

APIS: Camera, GPS, Gyroscope

Expo XDE


Expo XDE
jeffgukang
Project
Restart
Help
Publish
Share
Device
Get Started
Create new project...
Open existing project...
My Projects
coin-tutorial
~/Documents/Business...utorial/coin-tutorial
rnweather
~/Documents/Business...herTutorial/rnweather
Connection
~/Documents/Projects/ConnectChat/Connection

Expo Application

Create Project

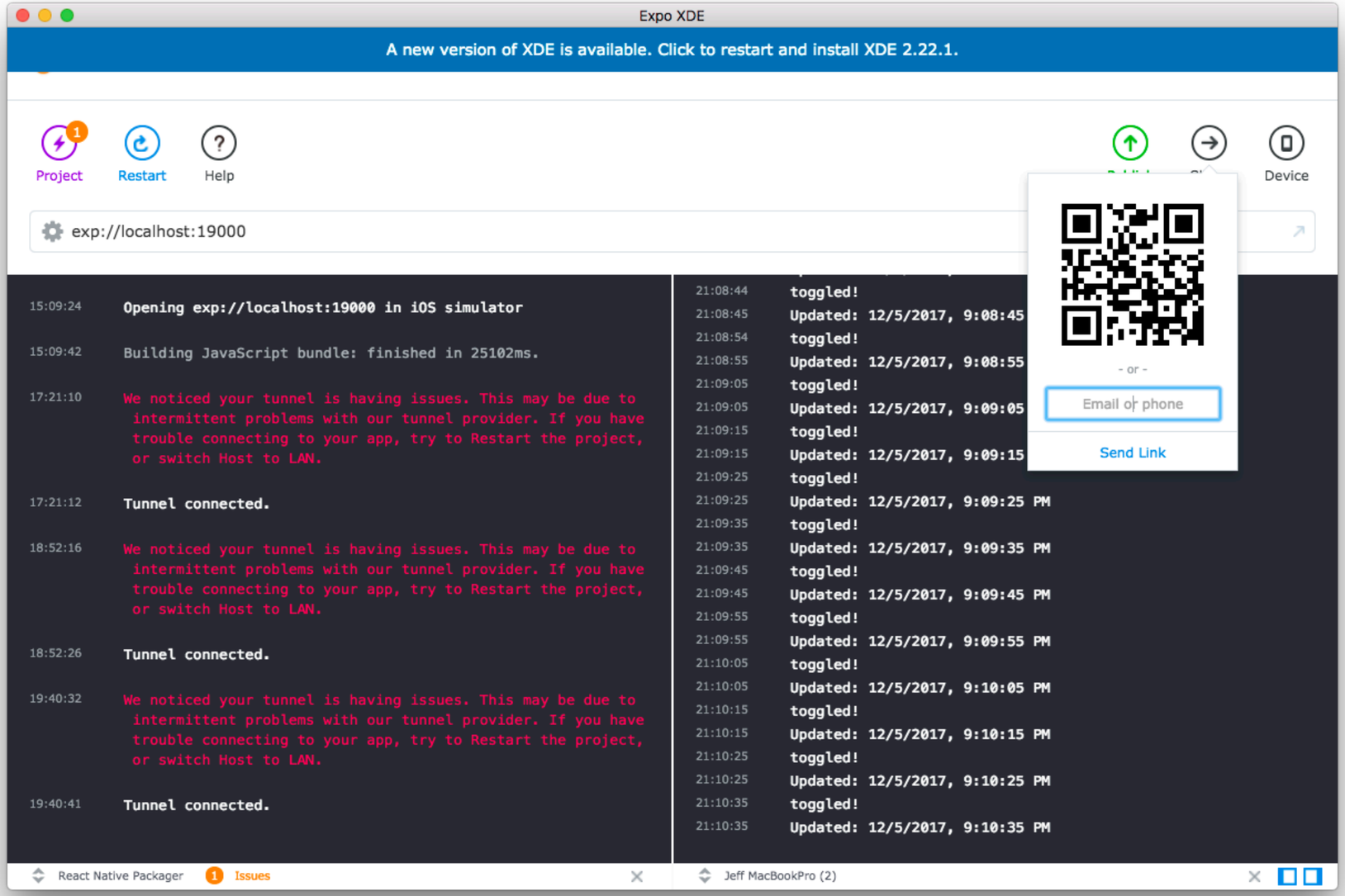
subtitle

프로젝트 생성 및 오픈

QR코드로 디바이스에서 실행

Shake IT! 으로 개발 메뉴 열기

Expo XDE


Expo XDE
A new version of XDE is available. Click to restart and install XDE 2.22.1.
Project
Restart
Help
Device
exp://localhost:19000
15:09:24 Opening exp://localhost:19000 in iOS simulator
15:09:42 Building JavaScript bundle: finished in 25102ms.
17:21:10 We noticed your tunnel is having issues. This may be due to intermittent problems with our tunnel provider. If you have trouble connecting to your app, try to Restart the project, or switch Host to LAN.
17:21:12 Tunnel connected.
18:52:16 We noticed your tunnel is having issues. This may be due to intermittent problems with our tunnel provider. If you have trouble connecting to your app, try to Restart the project, or switch Host to LAN.
18:52:26 Tunnel connected.
19:40:32 We noticed your tunnel is having issues. This may be due to intermittent problems with our tunnel provider. If you have trouble connecting to your app, try to Restart the project, or switch Host to LAN.
19:40:41 Tunnel connected.
21:08:44 toggled!
21:08:45 Updated: 12/5/2017, 9:08:45
21:08:54 toggled!
21:08:55 Updated: 12/5/2017, 9:08:55
21:09:05 toggled!
21:09:05 Updated: 12/5/2017, 9:09:05
21:09:15 toggled!
21:09:15 Updated: 12/5/2017, 9:09:15
21:09:25 toggled!
21:09:25 Updated: 12/5/2017, 9:09:25 PM
21:09:35 toggled!
21:09:35 Updated: 12/5/2017, 9:09:35 PM
21:09:45 toggled!
21:09:45 Updated: 12/5/2017, 9:09:45 PM
21:09:55 toggled!
21:09:55 Updated: 12/5/2017, 9:09:55 PM
21:10:05 toggled!
21:10:05 Updated: 12/5/2017, 9:10:05 PM
21:10:15 toggled!
21:10:15 Updated: 12/5/2017, 9:10:15 PM
21:10:25 toggled!
21:10:25 Updated: 12/5/2017, 9:10:25 PM
21:10:35 toggled!
21:10:35 Updated: 12/5/2017, 9:10:35 PM
- or -
Email or phone
Send Link
React Native Packager
1 Issues
Jeff MacBookPro (2)

App.js

```
import React from 'react';
import { StyleSheet, Text, View } from 'react-native';

export default class App extends React.Component {
  render() {
    return ( // JSX Area
      <View style={styles.container}>
      <Text>Open up App.js to start working on your app</Text> // Edit here
      </View>
    );
  }
}

const styles = StyleSheet.create({
  container: {
    flex: 1,
    backgroundColor: '#fff',
    alignItems: 'center',
    justifyContent: 'center',
  },
});
```

Live/Hot Reloading

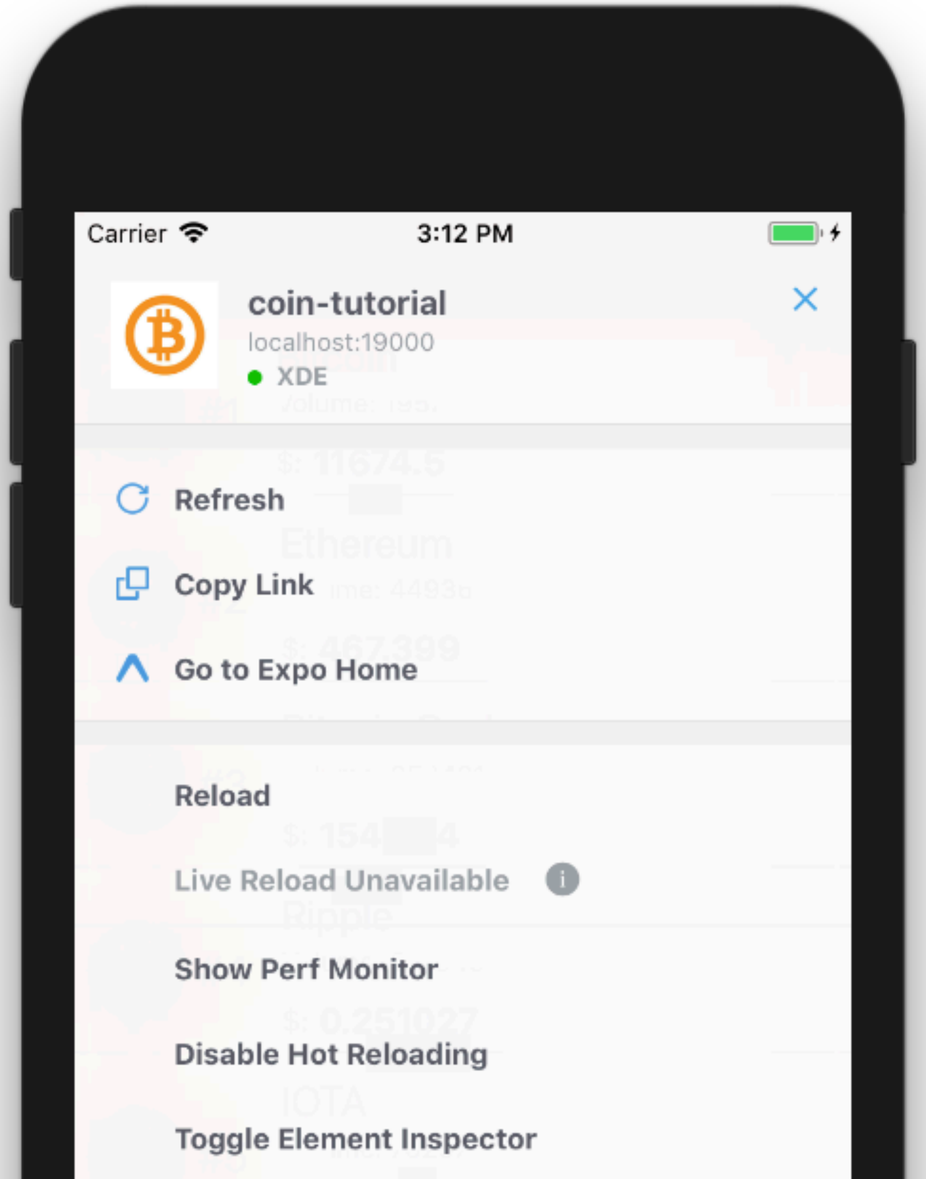
Hot Hot Hot

Live Reloading

파일이 변경될 경우 앱을 리로드

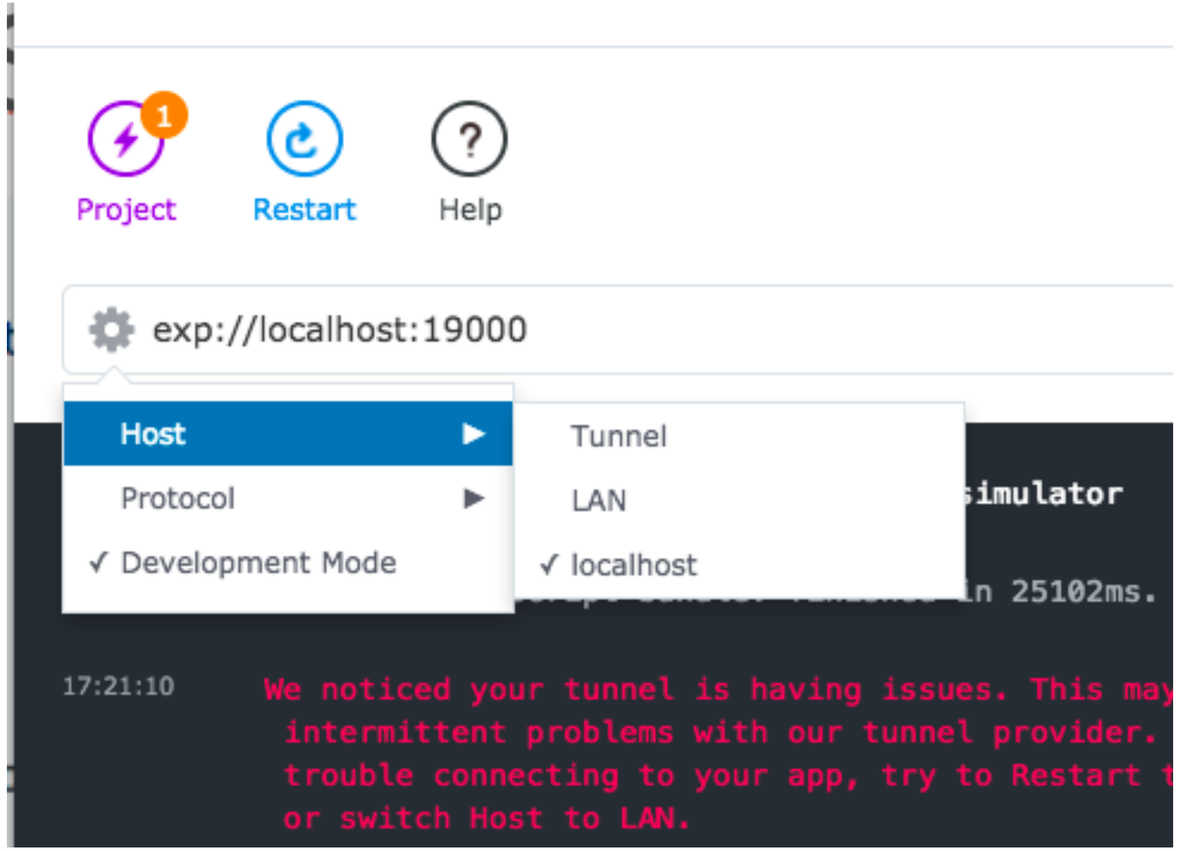
Hot Reloading

해당 변경 부분만을 리로드



Tunnel, Lan, Localhost

실시간 테스트



Tunnel

Expo에서 제공해주는 서버 사용(어디서든 가능)

Lan

wifi 사용(권장)

Localhost

시뮬레이터에서 사용(제일 빠름)

COMPONENT

컴포넌트란?

React Component

독립적인 단위 모듈

React.js에서 상속

단방향 데이터 흐름을 강제

Basic Components

** , <button>, <img>**

Basic Components

Most apps will end up using one of these basic components. You'll want to get yourself familiarized with all of these if you're new to React Native.

View	Text	Image
The most fundamental component for building a UI.	A component for displaying text.	A component for displaying images.

TextInput	ScrollView	StyleSheet
A component for inputting text into the app via a keyboard.	Provides a scrolling container that can host multiple components and views.	Provides an abstraction layer similar to CSS stylesheets.

컴포넌트 만들기

component/CoinView.js

코인의 정보리스트를 보여줄 뷰 컴포넌트

컴포넌트 만들기

components/CoinView.js

```
import React from 'react'
import { StyleSheet, Text, View } from 'react-native';

class CoinView extends React.Component {
  render () {
    return (
      <View style={styles.container}>
        <Text>New View </Text>
      </View>
    )
  }
}
```

```
export default CoinView;
```

주석

subtitle

```
{/* A JSX comment */}
```

```
{/*
  Multi
  line
  comment
*/}
```

컴포넌트 만들기

App.js

```
import CoinView from './components/CoinView'; // Call your new friend
```

```
export default class App extends React.Component {
  render() {
    return (
      <View style={styles.container}>
        <View style={[styles.box, {backgroundColor: 'red'}]}></View>
        <View style={[styles.box, {backgroundColor: 'green'}]}></View>
        <View style={[styles.box, {backgroundColor: 'blue'}]}></View>
        <CoinView></CoinView>
      </View>
    );
  }
}
```

Props

Props

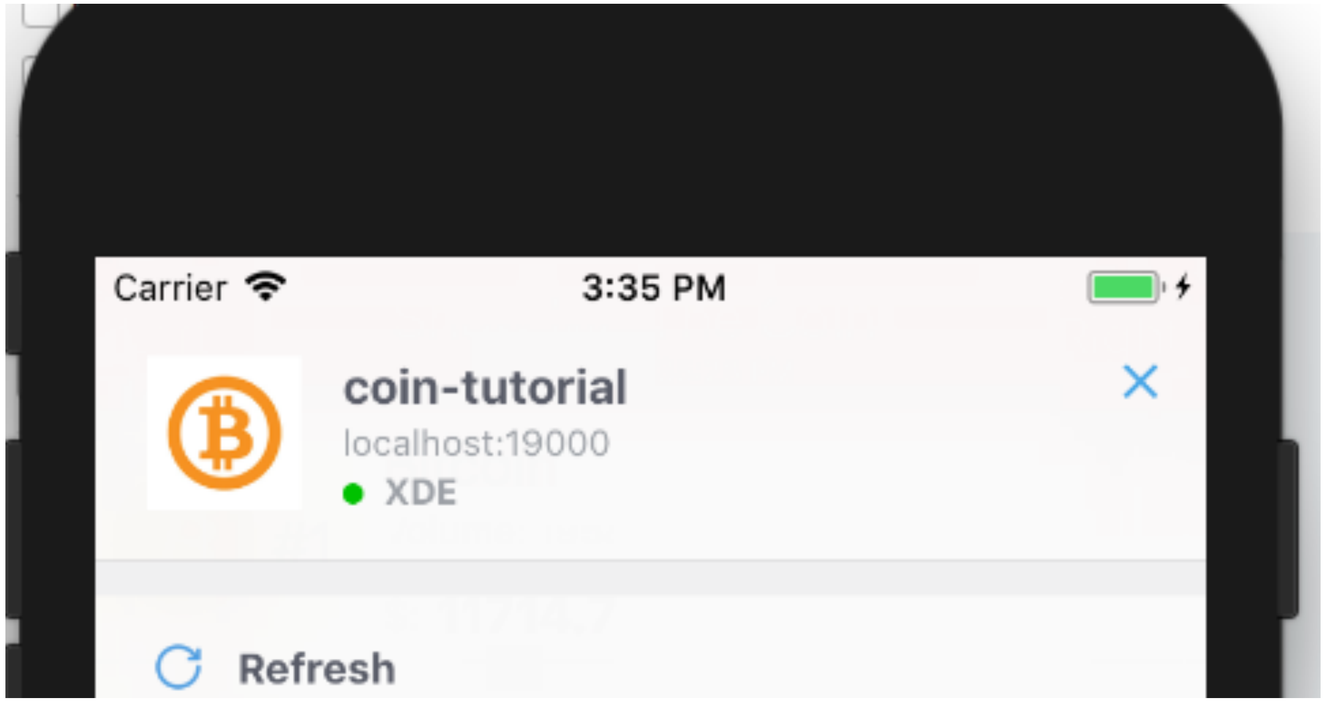
properties

컴포넌트에서 사용 할 데이터 중 변동되지 않는 데이터

parent 컴포넌트에서 **child** 컴포넌트로 데이터를 전할 때 주로 사용

StatusBar Component

앱 스테이터스바 컨트롤을 위한 컴포넌트



StatusBar Props

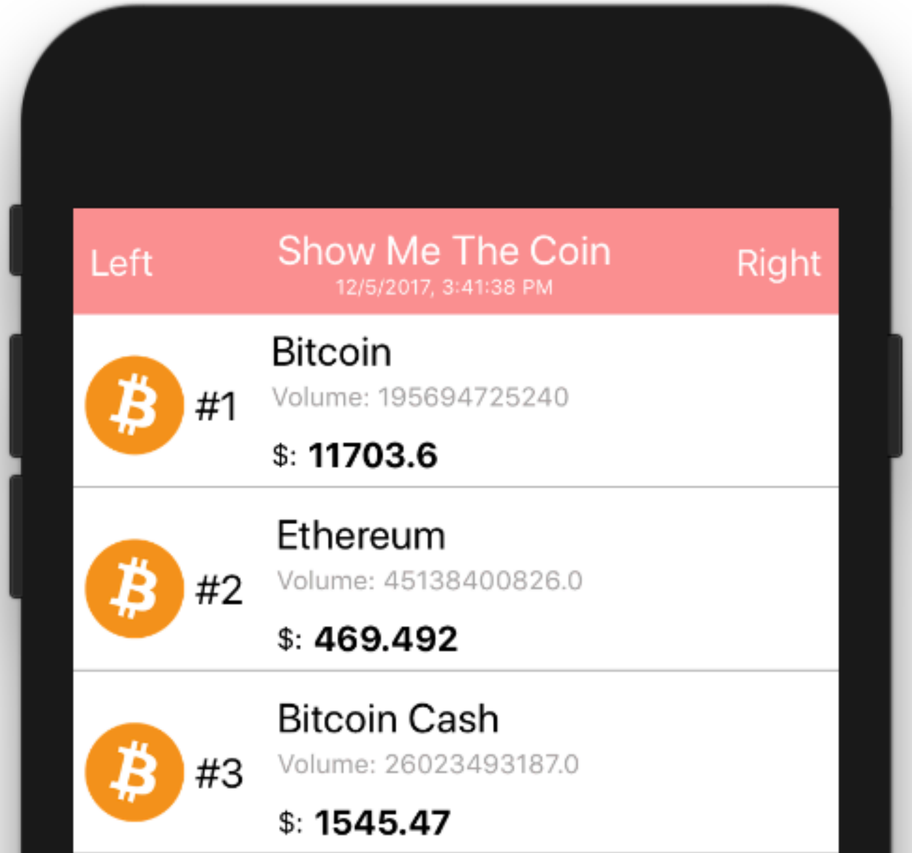
App.js

```
...
import { StyleSheet, Text, View, StatusBar } from 'react-native'; // Use StatusBar component
...
render() {
  return (
    <View style={styles.container}>
      <StatusBar
        backgroundColor="blue"
        barStyle="light-content"
      />

      <CoinView></CoinView>
    </View>
  );
}
```

Custom TopBar

/components/TopBar.js



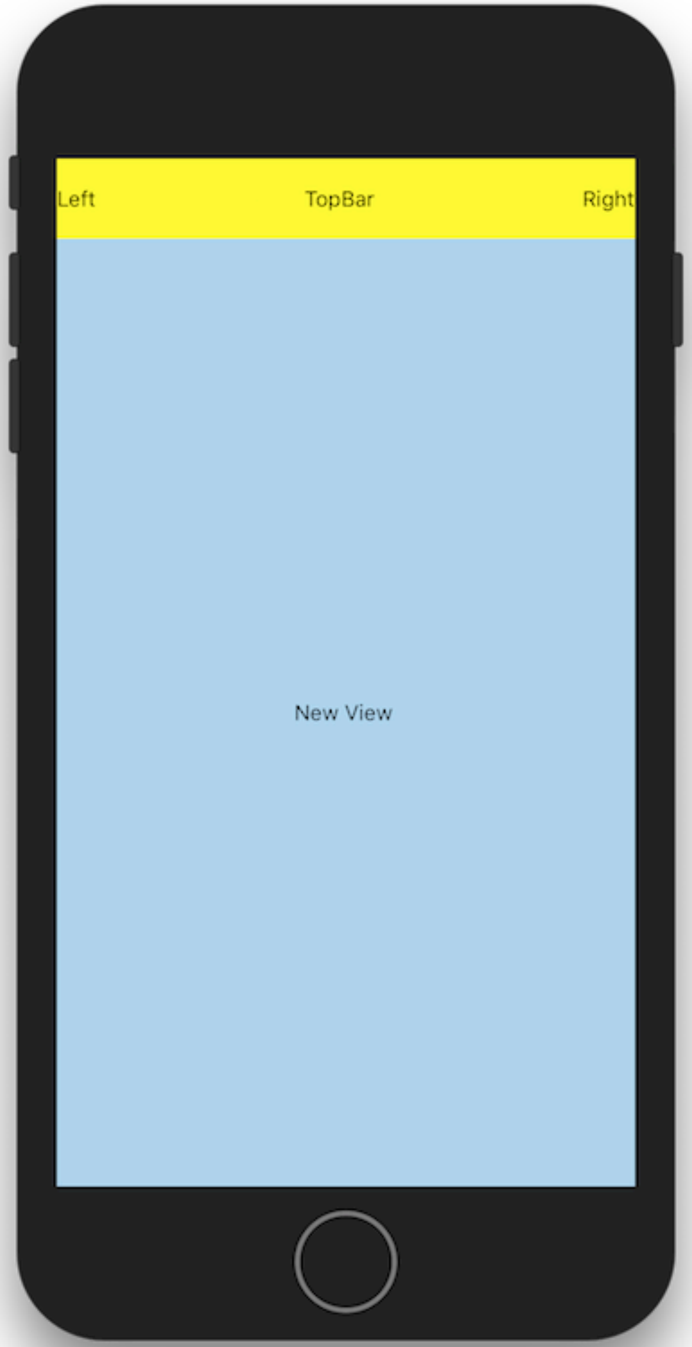
/components/TopBar.js

```
import React from 'react'
import { StyleSheet, Text, View } from 'react-native';

class TopBar extends React.Component {
  render () {
    return (
      <View style={styles.container}>
        <Text>Left</Text>
        <Text>TopBar</Text>
        <Text>Right</Text>
      </View>
    )
  }
}

const styles = StyleSheet.create({
  container: {
    width: '100%',
    height: 52,
    flexDirection: 'row', // row
    backgroundColor: 'yellow',
    alignItems: 'center',
    justifyContent: 'space-between', // center, space-around
  },
});

export default TopBar;
```


Left
TopBar
Right
New View

Props with Components

components/CoinView.js

```
class CoinView extends React.Component {
    render () {
      return (
-       <View style={styles.container}>
-         <Text>New View </Text>
+       <View style={this.props.style}> { /* Ready to get style from a parent component */ }
+         <Text>코인뷰가 나올것입니다.</Text>
        </View>
      )
    }
```

Props with Components

components/TopBar.js

```
return (
        <View style={styles.container}>
          <Text>Left</Text>
 -        <Text>TopBar</Text>
 +        <Text style={{fontSize: 20}}>{this.props.title}</Text>
          <Text>Right</Text>
        </View>
      )
```

Props with Components

App.js

```
-         <TopBar></TopBar>
-         <CoinView></CoinView>
+         <TopBar title="코인 시세"/>
+         <CoinView style={styles.coinView} />
```

Style

```
+  coinView: {
+    width: '100%',
+    flex: 1,
+    flexDirection: 'column', // row
+    backgroundColor: 'skyblue',
+    alignItems: 'center',
+    justifyContent: 'space-around', // center, space-around
}
```

State

컴포넌트 내부에서 사용 할 유동적인 데이터

State

To be continued…

CoinDetail Component

본격적인 시작

CoinDetail Component

코인별 세부 정보를 보여줄 컴포넌트

CoinDetail Component

compoenents/CoinDetail.js

```
import React from 'react'
 import { StyleSheet, Text, View, Image } from 'react-native';

 class CoinDetail extends React.Component {
   render () {
     let date = new Date();
     let now = date.toLocaleString()

     return (
       <View style={styles.container}>
         <Image
         style={{width: 50, height: 50}}
         source={{uri: 'https://bitcoin.org/img/icons/opengraph.png'}}
         />
         <Text style={[styles.text, {flex: 1}]}>{'#' + (this.props.rank || 'Rank')}</Text>
         <Text style={[styles.text, {flex: 1}]}>{this.props.name || 'Name'}</Text>
         <Text style={[styles.text, {flex: 1}]}>{'Price: ' + (this.props.price || 0)}</Text>
         <Text style={[styles.text, {flex: 1}]}>{'Volume: ' + (this.props.volumn || 0)}</Text>
         <Text style={[styles.text, {flex: 1}]}>{'Updated: ' + (this.props.time || now)}</Text>
       </View>
     )
   }
 }
```

CoinDetail Component

compoenents/CoinDetail.js

```
const styles = StyleSheet.create({
  container: {
    width: '100%',
    height: 80,
    flexDirection: 'row', // row
    backgroundColor: 'blue',
    alignItems: 'center',
    justifyContent: 'space-around', // center, space-around
    marginTop: 5,
    marginBottom: 5,
  },
  text: {
    color: 'white',
  }
});

export default CoinDetail;
```

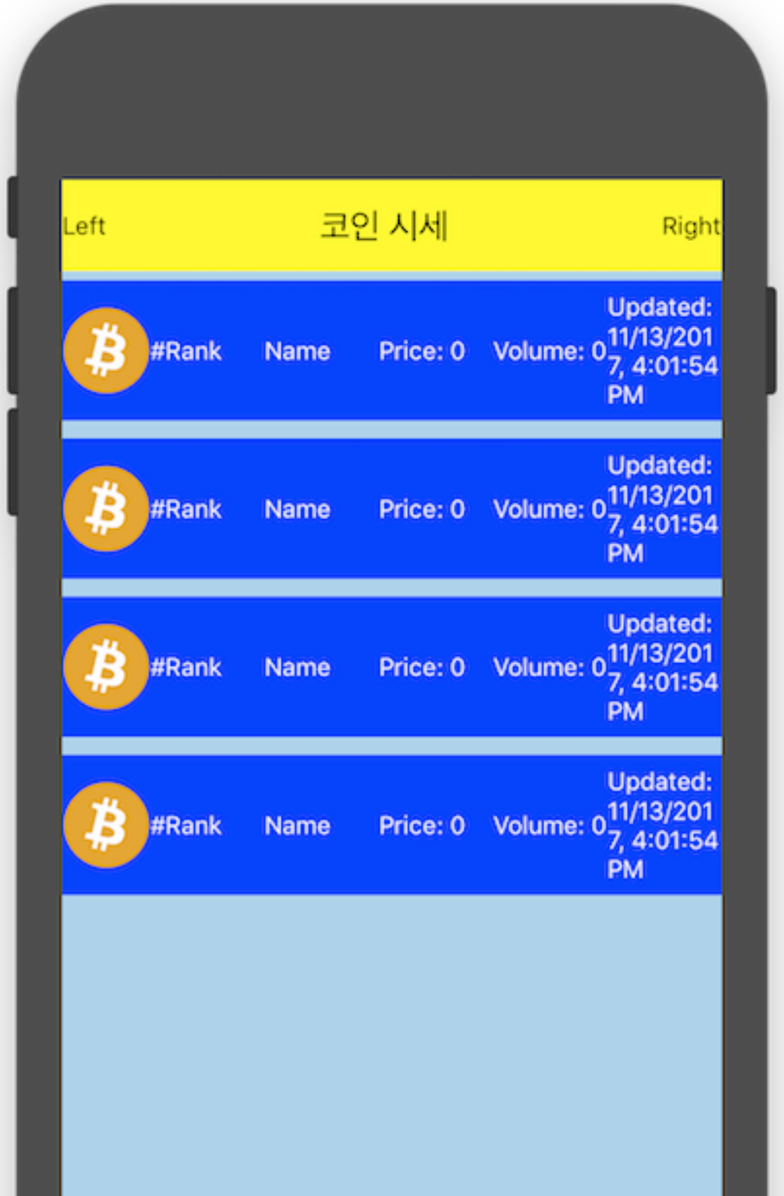
CoinView에서 호출

compoenents/CoinView.js

```
import CoinDetail from './CoinDetail';

class CoinView extends React.Component {
  render () {
    return (
      <View style={this.props.style}>
-       <Text>코인뷰가 나올것입니다.</Text>
+       <CoinDetail></CoinDetail>
+       <CoinDetail></CoinDetail>
+       <CoinDetail></CoinDetail>
+       <CoinDetail></CoinDetail>
      </View>
    )
  }
}
```

Run


Left
코인 시세
Right
#Rank
Name
Price: 0
Volume: 0
Updated: 11/13/2017, 4:01:54 PM
#Rank
Name
Price: 0
Volume: 0
Updated: 11/13/2017, 4:01:54 PM
#Rank
Name
Price: 0
Volume: 0
Updated: 11/13/2017, 4:01:54 PM
#Rank
Name
Price: 0
Volume: 0
Updated: 11/13/2017, 4:01:54 PM

더미데이타 넣기

coinmarketcap api

coinmarketcap

샘플 데이타 구조


```
[
    {
        "id": "bitcoin",
        "name": "Bitcoin",
        "symbol": "BTC",
        "rank": "1",
        "price_usd": "573.137",
        "price_btc": "1.0",
        "24h_volume_usd": "72855700.0",
        "market_cap_usd": "9080883500.0",
        "available_supply": "15844176.0",
        "total_supply": "15844176.0",
        "percent_change_1h": "0.04",
        "percent_change_24h": "-0.3",
        "percent_change_7d": "-0.57",
        "last_updated": "1472762067"
    },{…}
]
```

샘플 데이타

components/CoinView.js

```
+const sampleData = [
 +  {
 +        "id": "bitcoin",
 +        "name": "Bitcoin",
 +        "symbol": "BTC",
 +        "rank": "1",
 +        "price_usd": "6195.6",
 +        "price_btc": "1.0",
 +        "24h_volume_usd": "8119580000.0",
 +        "market_cap_usd": "103323711420",
 +        "available_supply": "16676950.0",
 +        "total_supply": "16676950.0",
 +        "max_supply": "21000000.0",
 +        "percent_change_1h": "-1.8",
 +        "percent_change_24h": "4.19",
 +        "percent_change_7d": "-15.65",
 +        "last_updated": "1510556652"
 +    },
```

https://api.coinmarketcap.com/v1/ticker/ .... 복붙복붙

컴포넌트 변수로 넣기

components/CoinView.js

```
render () {
  let coinDetailCells = (
    <View>
      <CoinDetail></CoinDetail>
      <CoinDetail></CoinDetail>
      <CoinDetail></CoinDetail>
      <CoinDetail></CoinDetail>
    </View>
  );

  return (
    <View style={this.props.style}>
      {coinDetailCells}
    </View>
  )
}
```

샘플데이타 적용

components/CoinView.js

```
let detailCells = [];

for (var i = 0; i < sampleData.length; i++) {
  let data = sampleData[i];
  let coinDetail = (
    <CoinDetail
      key={data.index}
      rank={data.rank}
      name={data.name}
      price={data.price_usd}
      volumn={data.market_cap_usd}
    />
  )
  detailCells.push(coinDetail);
}
```

```
    return (
      <View style={this.props.style}>
-         {coinDetailCells}
+         {detailCells}
      </View>
    )
```

detailCells: [<CoinDetail/>, <CoinDetail/>]

샘플데이타 적용(map 사용)

components/CoinView.js

```
let detailCells = sampleData.map( (data, index) => {
  const {rank, name, price_usd, market_cap_usd, time} = data; // Destructuring
  return (
    <CoinDetail
      key={index}
      rank={rank}
      name={name}
      price={price_usd}
      volumn={market_cap_usd}
    />
  );
});
```

```
    return (
      <View style={this.props.style}>
-         {coinDetailCells}
+         {detailCells}
      </View>
    )
```

detailCells: [<CoinDetail/>, <CoinDetail/>]

실제데이타 넣기

fetch

Coinmarketcap Api

https://api.coinmarketcap.com/v1/ticker/

State

컴포넌트 내부에서 사용 할 유동적인 데이터

components/CoinView.js

```
class CoinView extends React.Component {
  constructor(props) {
    super(props);
    this.state = {
      coinDatas: [],
      isLoaded: false,
    };

    // Toggle the state every second

  }
```

Constructor: 클래스가 객체로 생성될때 실행되는 초기화 함수

fetch

자바스크립트 네트워킹 함수

components/CoinView.js

```
_getCoinDatas(limit) {
  this.setState({
    isLoaded: false,
  });

  fetch(
    `https://api.coinmarketcap.com/v1/ticker/?limit=${limit}`
  )
  .then(response => response.json())
  .then(data => {
    this.setState({
      coinDatas: data,
      isLoaded: true,
    });
  });
}
```

LifeCycle

Mount: 처음 실행될 때

components/CoinView.js

```
componentDidMount() { // After component loaded
  this._getCoinDatas(10);

  setInterval(() => {
    this._getCoinDatas(10);
    console.log('toggled!');
  }, 10000);
}
```

실제데이타 적용

components/CoinView.js

```
let detailCells = [];

for (var i = 0; i < this.state.coinDatas.length; i++) {
  let data = this.state.coinDatas[i];
  let coinDetail = (
    <CoinDetail
      key={data.index}
      rank={data.rank}
      name={data.name}
      price={data.price_usd}
      volumn={data.market_cap_usd}
    />
  )
  detailCells.push(coinDetail);
}
```

Date

components/CoinDetail.js

```
<Text style={[styles.text, {flex: 1}]}>{this.props.name || 'Name'}</Text>
          <Text style={[styles.text, {flex: 1}]}>{'Price: ' + (this.props.price || 0)}</Text>
          <Text style={[styles.text, {flex: 1}]}>{'Volume: ' + (this.props.volumn || 0)}</Text>
-         <Text style={[styles.text, {flex: 1}]}>{'Updated: ' + (this.props.time || now)}</Text>
+         <Text style={[styles.text, {flex: 1}]}>{'Updated: ' + (Date(this.props.time) || now)}</Text> //Date
        </View>
      )
    }
```

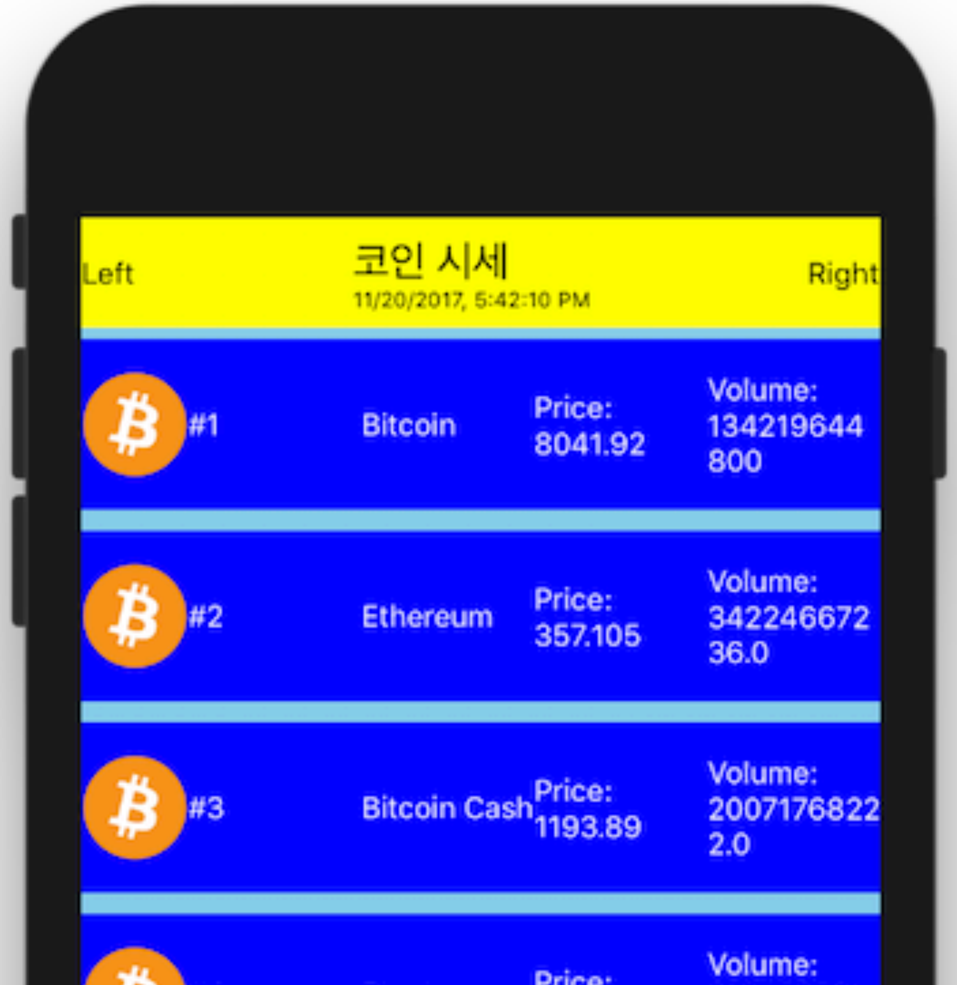
iPhone 8 - iOS 11.1

Component간의 Props 전달

Upgrade TopBar

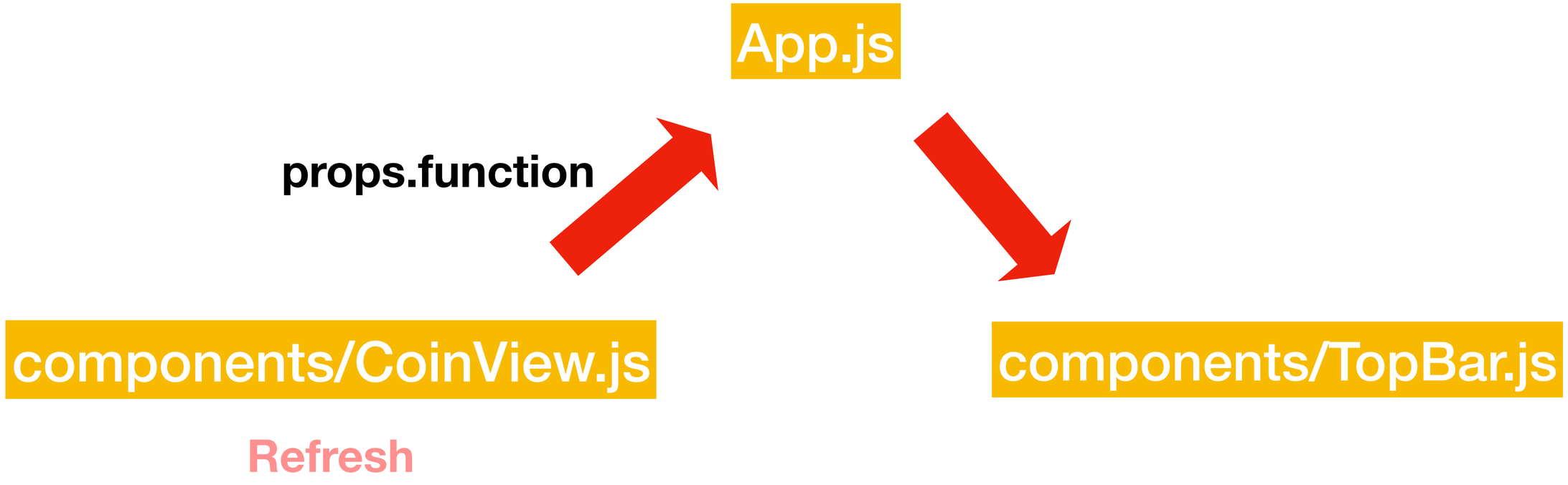
Props 고급

TopBar에 refreshDate를 넣어보자



Data Flow

컴포넌트 내부에서 사용 할 유동적인 데이터



props.function()

components/CoinView.js

```
_getCoinDatas(limit) {
    this.setState({
      isLoaded: false,
    });

    fetch(
      `https://api.coinmarketcap.com/v1/ticker/?limit=${limit}`
    )
    .then(response => response.json())
    .then(data => {
      let date = new Date();
      let now = date.toLocaleString()

      if (this.props.refreshDate != null) {
        this.props.refreshDate(now); // Run func type props
      }

      this.setState({
        coinDatas: data,
        isLoaded: true,
```

State: refreshDate

App.js

```
export default class App extends React.Component {
  constructor(props) {
    super(props);
    this.state = {
      refreshDate: '-',
    };
  }

  _setRefreshDate(date) { // Called from CoinView's prop
    console.log('Updated: '+ date);
    this.setState({
      refreshDate: date,
    });
  }
```

State: refreshDate

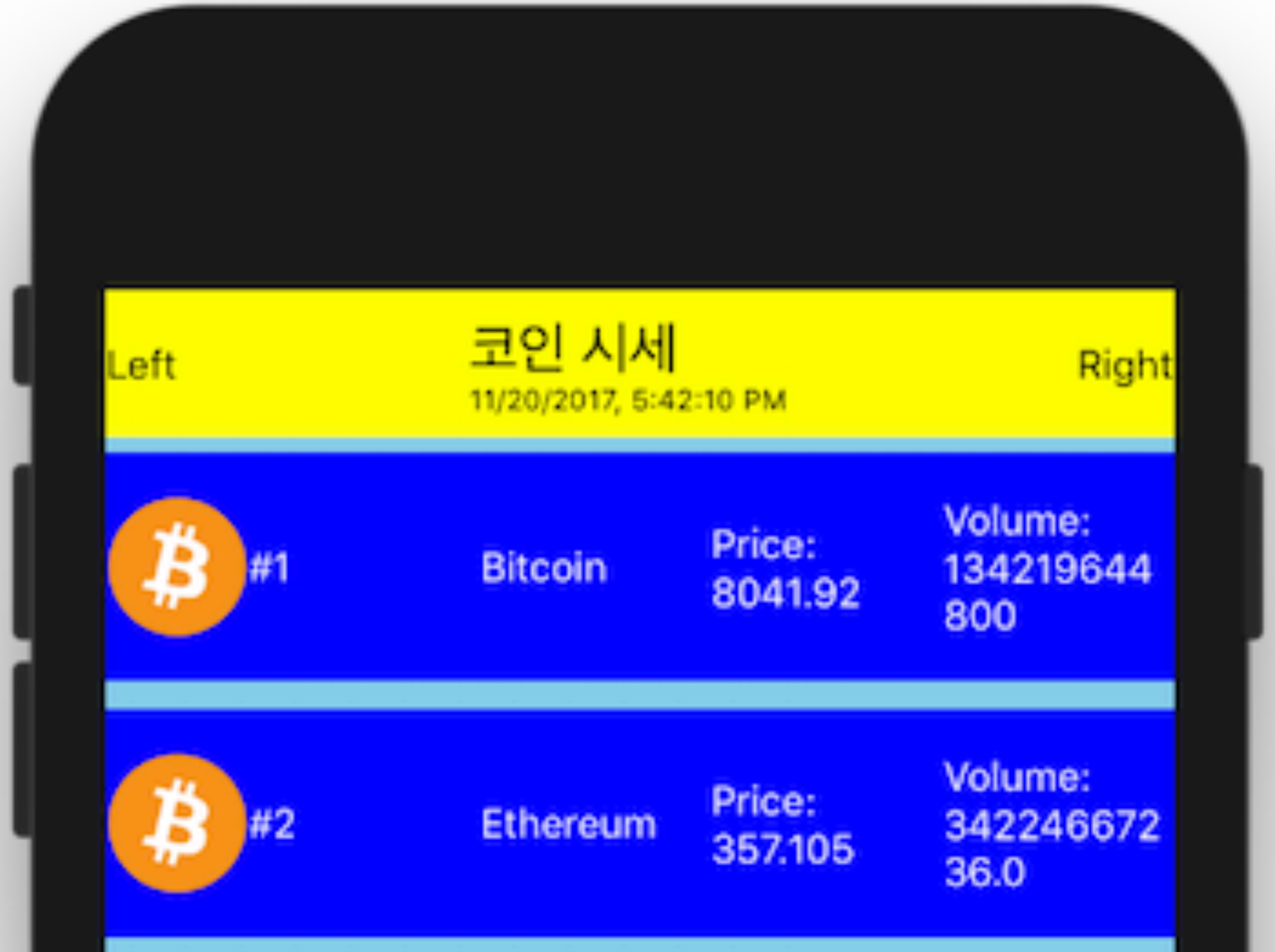
App.js

```
render() {
  return (
    <View style={styles.container}>
      <StatusBar
        hidden={true}
        backgroundColor="blue"
        barStyle="light-content"
      />
    <TopBar title="코인 시세" refreshDate={this.state.refreshDate} />
      <CoinView
        refreshDate={(date) => this._setRefreshDate(date)} {/* // function type prop */}
        style={styles.coinView} />
    </View>
  );
}
```

TopBar Subtitle

components/TopBar.js

```
return (
        <View style={styles.container}>
          <Text>Left</Text>
         <View>
           <Text style={{fontSize: 20}}>{this.props.title}</Text>
           <Text style={{fontSize: 10}}>{this.props.refreshDate || ','}</Text>
         </View>
          <Text>Right</Text>
        </View>
    )
```


Left
코인 시세
11/20/2017, 5:42:10 PM
Right
#1
Bitcoin
Price:
8041.92
Volume:
134219644
800
#2
Ethereum
Price:
357.105
Volume:
342246672
36.0

ScrollView

ScrollView

EDIT

Component that wraps platform ScrollView while providing integration with touch locking "responder" system.

Keep in mind that ScrollViews must have a bounded height in order to work, since they contain unbounded-height children into a bounded container (via a scroll interaction). In order to bound the height of a ScrollView, either set the height of the view directly (discouraged) or make sure all parent views have bounded height. Forgetting to transfer `{flex: 1}` down the view stack can lead to errors here, which the element inspector makes easy to debug.

Doesn't yet support other contained responders from blocking this scroll view from becoming the responder.

`<ScrollView>` vs `<FlatList>` - which one to use?

`ScrollView` simply renders all its react child components at once. That makes it very easy to understand and use.

On the other hand, this has a performance downside. Imagine you have a very long list of items you want to display, maybe several screens worth of content. Creating JS components and native views for everything all at once, much of which may not even be shown, will contribute to slow rendering and increased memory usage.

This is where `FlatList` comes into play. `FlatList` renders items lazily, just when they are about to appear, and removes items that scroll way off screen to save memory and processing time.

`FlatList` is also handy if you want to render separators between your items, multiple columns, infinite scroll loading, or any number of other features it supports out of the box.

ScrollView

components/CoinView.js

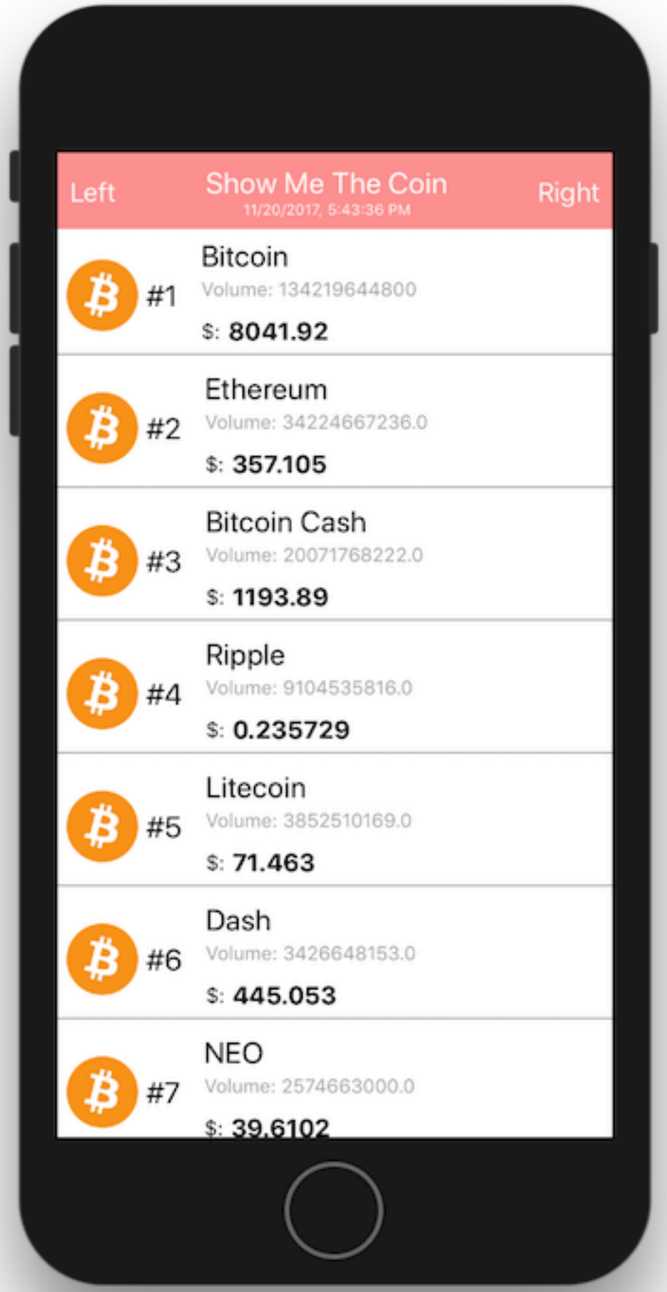
```
...
import { StyleSheet, Text, View, ScrollView } from 'react-native';

...

return (
  <ScrollView style={this.props.style}>
    {detailCells}
  </ScrollView>
)

...
```

Style 적용

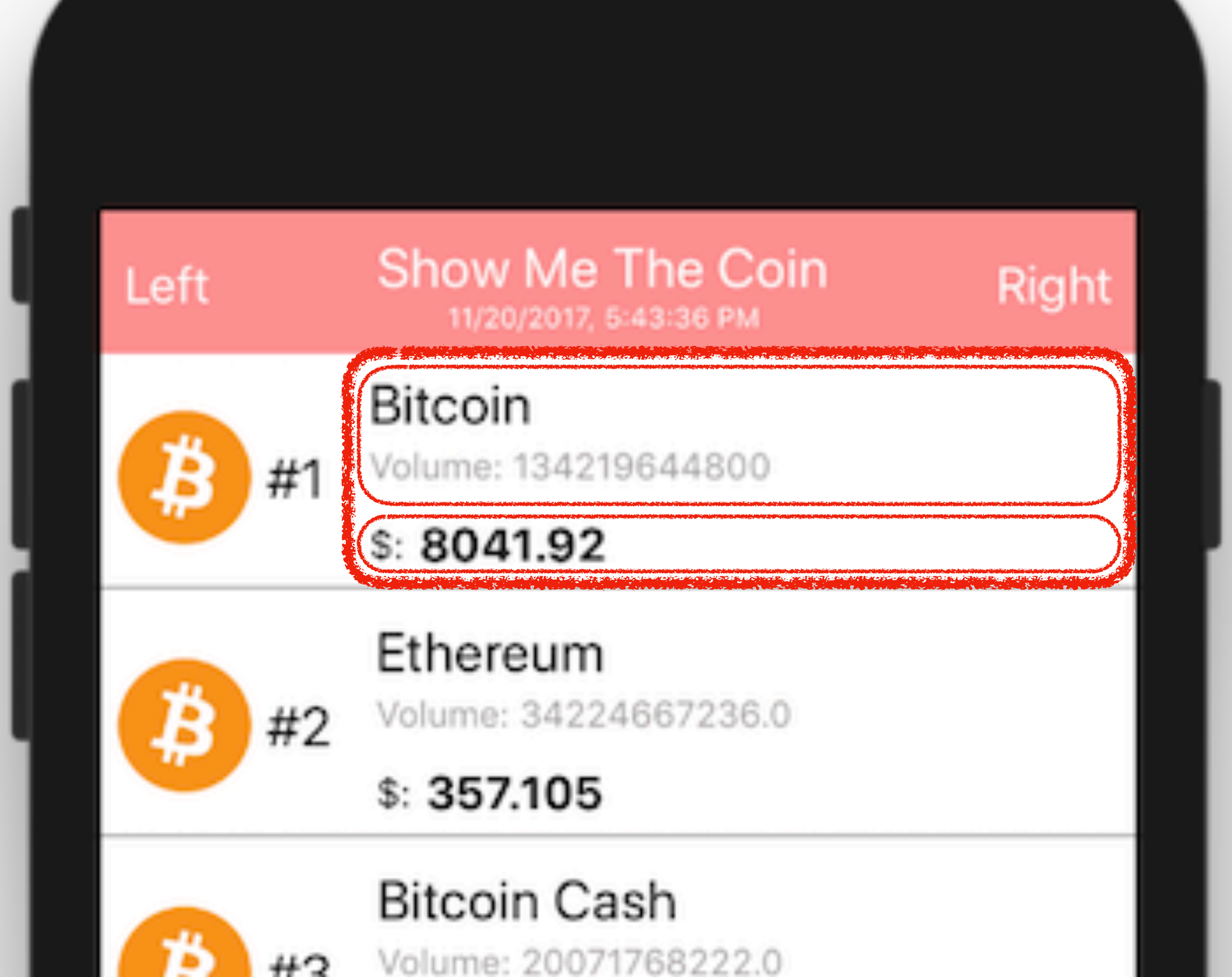


iPhone 8 - iOS 11.1

Style

App.js

```
@@ -47,7 +47,7 @@ const styles = StyleSheet.create({
47        width: '100%',
48        flex: 1,
49        flexDirection: 'column', // row
-       backgroundColor: 'skyblue',
50      +   backgroundColor: 'white',
51        // alignItems: 'center',
52        // justifyContent: 'space-around', // center, space-around
53      }
```


Left
Show Me The Coin
11/20/2017, 5:43:36 PM
Right
#1
Bitcoin
Volume: 134219644800
$: 8041.92
#2
Ethereum
Volume: 34224667236.0
$: 357.105
Bitcoin Cash
Volume: 20071768222.0

Style

components/CoinDetail.js

```
const styles = StyleSheet.create({
  container: {
    width: '100%',
    height: 80,
    flexDirection: 'row', // row
    backgroundColor: 'white',
    alignItems: 'center',
    // justifyContent: 'space-around', // center, space-around
    marginTop: 5,
    marginBottom: 5,
    borderBottomColor: '#bbb',
    borderBottomWidth: 1,
  },
  text: {
    color: 'black',
  },
  rank: {
    fontSize: 20,
    marginRight: 15,
  },
  name: {
    fontSize: 20,
    marginRight: 15,
  },
  price: {
    marginLeft: 5,
    fontSize: 17,
    fontWeight: 'bold',
    marginRight: 15,
  },
  volumn: {
    marginTop: 3,
    fontSize: 13,
    color: '#a8a5a5',
    marginRight: 15,
  },
});
```

```
render () {
  return (
    <View style={styles.container}>
      <Image
      style={{width: 50, height: 50, marginRight: 5, marginLeft: 5}}
      source={{uri: 'https://bitcoin.org/img/icons/opengraph.png'}}
      />
      <Text style={[styles.rank]}>{'#' + (this.props.rank || 'Rank')}</Text>
      <View style={{flexDirection: 'column'}}>
        <View>
          <Text style={[styles.name]}>{this.props.name || 'Name'}</Text>
          <Text style={[styles.volumn]}>{'Volume: ' + (this.props.volumn || 0)}</Text>
        </View>
        <View style={{
          flexDirection: 'row',
          marginTop: 10,
          marginBottom: 5,
          alignItems: 'center'
        }}>
          <Text>$:</Text><Text style={[styles.price]}>{(this.props.price || 0)}</Text>
        </View>
      </View>
    </View>
  )
}
```